



SEQUENCE LISTING

<110> Mitchell, Lloyd
Garcia-Blanco, Mariano M.
Puttaraju, Madaiah
Mansfield, Gary S.

<120> METHODS OF COMPOSITIONS FOR USE IN
SPLICEOSOME MEDIATED RNA TRANS-SPlicing

<130> A31304-BAE (072874.0156)

<140> 09/941,492
<141> 2001-08-29

<150> 09/838,858
<151> 2001-04-20

<150> 09/756,096
<151> 2001-01-08

<150> 09/158,863
<151> 1998-09-23

<150> 09/133,717
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<151> 1998-05-28

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<223> Oligonucleotide primer complimentary to the
Escherichia coli lacZ gene

<400> 29
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<210> 30
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide primer complimentary to the
Escherichia coli lacZ gene

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<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide primer complimentary to the
Escherichia coli lacZ gene

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<210> 32
<211> 47
<212> DNA
<213> Artificial Sequence

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<223> Oligonucleotide primer complimentary to the
Escherichia coli lacZ gene

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<210> 33
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<212> DNA
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<220>
<223> Oligonucleotide primer complimentary to the beta
HCG6 gene (accession #X00266)

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gcatggatcc tccggagggc ccctgggcac cttccac 37

<210> 34
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide primer complimentary to the beta
HCG6 gene (accession #X00266)

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ctgactgcag ggtaaccgga caaggacact gcttcacc 38

<210> 35
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide primer complimentary to the beta
HCG6 gene (accession #X00266)

<400> 35
gcatggtaac cctgcagggg ctgctgctgt tgctg 35

<210> 36
<211> 37
<212> DNA
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<220>
<223> Oligonucleotide primer complimentary to the beta
HCG6 gene (accession #X00266)

<400> 36
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<220>
<223> Oligonucleotide primer complimentary to the
Escherichia coli lacZ gene

<400> 37
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<210> 38
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<220>
<223> Oligonucleotide primer complimentary to the
Escherichia coli lacZ gene

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Escherichia coli lacZ gene

<400> 39
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<212> DNA
<213> Homo sapien

<400> 41
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<210> 42
<211> 30
<212> DNA
<213> Homo sapien

<400> 42
acctctgcag acttcacttc taatgatgat 30

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<210> 44
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<212> DNA
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<400> 44
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<400> 45
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<400> 46
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<210> 47
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<210> 51
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<400> 51
gacctctcga gggatttggg gaattatttg ag 32

<210> 52
<211> 21
<212> DNA
<213> Homo sapien

<400> 52
aactagaagg cacagtcgag g 21

<210> 53
<211> 24
<212> DNA
<213> Artificial Sequence

<220>

<223> Trans-spliced product containing human chorionic
gonadotropin gene 6 sequences and Corynebacterium
diphtheriae toxin A sequence

<400> 53
gagatgttcc agggcgtgat gatg 24

<210> 54
<211> 127
<212> RNA
<213> Artificial Sequence

<220>
<223> PTM intramolecular base paired stem

<221> misc_feature
<222> (57)...(70)
<223> Loop comprising a combination of 14 nucleotides
according to the specification

<400> 54
gcuagccugg gacaaggaca cugcuucacc cgguuaguag accacagccc ugagccnnnn 60
nnnnnnnnnnn aucguuaacu aauaaacuac uaacugggug aacuucuguu uuuuucucga 120
gcugcag 127

<210> 55
<211> 127
<212> RNA
<213> Artificial Sequence

<220>
<223> PTM intramolecular base paired stem

<221> misc_feature
<222> (57)...(70)
<223> Loop comprising a combination of 14 nucleotides
according to the specification

<400> 55
gcuagccugg gacaaggaca cugcuucacc cgguuaguag accacagccc ugagccnnnn 60
nnnnnnnnnnn aucguuaacu aauaaacuac uaacugggug aacuucugua uuauucucga 120
gcugcag 127

<210> 56
<211> 127
<212> RNA
<213> Artificial Sequence

<220>
<223> PTM intramolecular base paired stem

<221> misc_feature
<222> (57)...(70)
<223> Loop comprising a combination of 14 nucleotides
according to the specification

<400> 56
gcuagccugg gacaaggaca cugcuucacc cgguuaguag accacagccc ugagccnnnn 60
nnnnnnnnnnn aucguuaacu aauaaacuac uaacugggug aaguucuguc cuugucucga 120

gcugcag 127

<210> 57
<211> 132
<212> DNA
<213> Artificial Sequence

<220>
<223> Trans-spliced product containing human chorionic
gonadotropin gene 6 sequences and Corynebacterium
diphtheriae toxin A sequences

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tccattcaaa aa 132

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<213> Artificial Sequence

<220>
<223> Artificial sequence derived from Escherichia coli
lacZ gene

<400> 58
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<210> 59
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial sequence derived from Escherichia coli
lacZ gene

<400> 59
cgtttacagg taagaggatc ctccggaggg ccc 33

<210> 60
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial sequence derived from Escherichia coli
lacZ gene

<400> 60
tggtgtcaaa aataataagt taacaagctt 30

<210> 61
<211> 25
<212> DNA
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<220>

<223> Trans-spliced product containing Escherichia coli
lacZ and human chorionic gonadotropin gene 6
sequences

<400> 61
cagcagcccc tgtaaacggg gatac 25

<210> 62
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<212> DNA
<213> Artificial Sequence

<220>
<223> Trans-spliced product containing Escherichia coli
lacZ gene sequences

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agggcggctt cgtctaataa tggactggg tggatcagtc gctgattaaa tatgtatgaaa 180
acggcaacc cgtggtcggc ttacggcggt gatttggcg atacgcccga cgatcgccag 240
ttctgtatga acggctcggt ctttgccgac cgacgcccgc atccag 286

<210> 63
<211> 196
<212> DNA
<213> Artificial Sequence

<220>
<223> Trans-spliced product containing Escherichia coli
lacZ gene sequences

<400> 63
ggcttcgct acctggagag acgcgcccgc tgatccttg cgaatacgcc cacgcgatgg 60
gtaacagtct tggcggtttc gctaaatact ggcaggcggt tcgtcagttat ccccgtttac 120
agggctgctg gctgttgctg ctgctgagca tggcgccgac atgggcatcc aaggagccac 180
ttcggccacg gtgccc 196

<210> 64
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<212> DNA
<213> Artificial Sequence

<220>
<223> Trans-spliced product comprising cystic fibrosis
transmembrane regulator-derived sequences and His
tag sequences

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aacgttgctc gaggactaac tggcacctct tctttttttt cctgcagact tcacttctaa 120
tgatgattat gggagaactg gagccttcag agggtaaaat taagcacagt ggaagaattt 180
cattctgttc tcaaatggattatgc ctggcaccat taaagaaaat atcatctttg 240
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atcatcatca tcatcattag gcggccgcca ctgtgctgga tatctgcaga attccaccac 360
actggactag tggatccgag ctcggatcca agcttaagtt taaaccgctg atcagcctcg 420
actgtgcctt ctagttgcca gccatctgtt gtttgcctt ccccggtgcc ttccttgacc 480
ctgaaagggtg ccactccac 500

<210> 65
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Splice junction sequence

<400> 65
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<210> 66
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial sequence comprising sequences derived
from Escherichia coli lacZ gene

<400> 66
Asp Tyr Lys Asp Asp Lys
1 5

<210> 67
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial sequence comprising sequence derived
from Escherichia coli lacZ gene

<400> 67
ggagttgatc ccgtc 15

<210> 68
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial sequence comprising sequences derived
from Escherichia coli lacZ gene

<400> 68
gcagtgtcct tgtgcggta ccctgcaggg cggcttc 37

<210> 69
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<212> DNA
<213> Artificial Sequence

<220>
<223> PTM binding domain of PTM

<400> 69

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<212> DNA
<213> Artificial Sequence

<220>
<223> Spacer sequence of PTM

<400> 70
aacattatta taacgttgct cgaa 24

<210> 71
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Branch point, pyrimidine tract and acceptor splice
site of PTM

<400> 71
tactaactgg taccttttct ttttttttg atatcctgca gggcggc 47

<210> 72
<211> 70
<212> DNA
<213> Artificial Sequence

<220>
<223> Donor site and spacer sequence of PTM

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tgaacggtaa gtgttatcac cgatatgtgt ctaacctgat tcgggccttc gatacgctaa 60
gatccacccgg 70

<210> 73
<211> 260
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<213> Artificial Sequence

<220>
<223> Binding domain of spacer sequence

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ctggaaaact gataacacaa tgaaattctt ccactgtgct taaaaaaacc ctcttgaatt 180
ctccatttct cccataatca tcattacaac tgaactctgg aaataaaacc catcattatt 240
aactcattat caaatcacgc 260

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<210> 75
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<220>
<223> Oligonucleotide

<400> 75
actcagtgatg attccacctt ctc 23

<210> 76
<211> 36
<212> DNA
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<220>
<223> Oligonucleotide

<400> 76
gacctctgca gacttcactt ctaatgatga ttatgg 36

<210> 77
<211> 33
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<220>
<223> Oligonucleotide primer

<400> 77
ctaggatccc gttcttttgt tcttcactat taa 33

<210> 78
<211> 33
<212> DNA
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<223> Oligonucleotide primer

<400> 78
ctagggttac cgaagtaaaa ccatacttat tag 33

<210> 79
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ctgatccacc cagtcaccatt a	21
<210> 84	
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<212> DNA
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<221> misc_feature
<222> (7)...(30)
<223> spacer sequence, see SEQ ID NO: 70

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<210> 86
<211> 71
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide primer

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ttttatcccc gtttacaggg cggcttcgtc tgggactggg tggatcagtc gctgattaaa 60
tatgtatgaaa a 71

<210> 87
<211> 66
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide

<400> 87
tttggcgata cgccgaacga tcgcccagttc tgtatgaacg gtctggtctt tgccgaccgc 60
acgccc 66

<210> 88
<211> 192
<212> DNA
<213> Artificial Sequence

<220>
<223> PTM sequence

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tccggccgca tcagcttttg cagccaaattc agttggatca tgcccggtac catcaaggag 120
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cagttggagg ag 192

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<211> 25
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<220>
<223> Oligonucleotide

<400> 89
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<210> 90
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide

<400> 90
gagaacataa tcttcggcgt cagttacg 28

<210> 91
<211> 30
<212> DNA
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<220>
<223> Oligonucleotide

<400> 91
gtcagttgga ggaggacatc tccaagttt 30

<210> 92
<211> 192
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<213> Artificial Sequence

<220>
<223> PTM exon 10

<400> 92
acgagacttgc tcatgtatcatgggcgag ttagaaccatgtgaaggcaa gatcaaacat 60
tccggccgca tcagcttttgcagccaaattc agttggatcatgcccgtac catcaaggag 120
aacataatct tcggcgtcag ttacgacgatcaccgctatc gctcggtgat taaggcctgt 180
cagttggagg ag 192

<210> 93
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<212> DNA
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<220>
<223> PTM sequence

<400> 93
aaatatcatt ggtgtttctt atgatga 27

<210> 94
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<212> DNA
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<220>
<223> Oligonucleotide

<400> 94

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<220>			
<223>	5' Splice site		
<400>	98		
cgtttacagg	taagtggatc	c	21
<210>	99		
<211>	27		
<212>	DNA		
<213>	Artificial Sequence		
<220>			
<223>	3' Splice site		
<400>	99		
ctgcagggcg	gcttcgtcta	ataatgg	27
<210>	100		
<211>	47		

<212> DNA
<213> Artificial Sequence

<220>
<223> Sequence from trans-splicing domain

<400> 100

tactaactgg taccttttct ttttttttgc atatcctgca gggcgcc

47

<210> 101
<211> 1584
<212> DNA
<213> Artificial Sequence

<220>
<223> CFTR PTM

<400> 101

atgcagaggt cgcctctgga aaaggccagc gttgtctcca aactttttt cagctggacc 60
agaccaattt tgaggaaagg atacagacag cgcctggaaat tgtcagacat ataccaaattc 120
ccttcgttg attctgtga caatctatct gaaaaattgg aaagagaatg ggatagagag 180
ctggcttcaa agaaaaatcc taaactcatt atgccttc ggcgtatgtt tttctggaga 240
tttatgttct atgaaatctt tttatattta ggggaagtca ccaaaggcagt acagcctctc 300
ttactggaa gaatcatagc ttccatgac ccggataaca aggaggaacg ctctatcgcg 360
atttatctag gcataggctt atgccttctc tttattgtga ggacactgct cctacaccca 420
gccatttttgc ccttcatca catttggaaatg cagatgagaa tagctatgtt tagtttgatt 480
tataagaaga ctttaaagct gtcaagccgt gttctagata aaataaagtat tggacaactt 540
gttagtctcc tttccaacaa cctgaacaaa tttgtatgaag gacttgcatt ggcacattc 600
gtgtggatcg ctcccttgca agtggcactc ctcatggggc taatctggga gttgttacag 660
gcgtctgcct tctgtggact tggttcctg atagtccttgc cccttttca ggctggctt 720
gggagaatga ttagtgaagta cagagatcag agagctggga agatcgtga aagacttgc 780
attacccatcg aaatgtatcga gaacatccaa tctgttaagg catactgctg ggaagaagca 840
atggaaaaaa tgattgaaaa cttaaagacaa acagaactga aactgactcg gaaggcagcc 900
tatgtgagat acttcaatag ctcagccctc ttcttcctcgtt gtttttttgc ggtgttttta 960
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tcattctgca ttgttctgca catggcggtc actcggcaat ttccctggc tgcataaaca 1080
tggtatgact ctcttgagc aataaacaaa atacaggatt tcttacaaaa gcaagaatat 1140
aagacattgg aatataactt aacgactaca gaagtagtga tggagaatgt aacagccttc 1200
tgggaggagg gatttgggaa attatttgag aaagcaaaac aaaacaataa caatagaaaa 1260
acttctaattt gtgtatgacag cctcttctc agtaatttct cacttctgg tactcctgtc 1320
ctgaaagata ttaatttcaa gatagaaaga ggacagttgt tggcggttgc tggatccact 1380
ggagcaggca agacgagctt gctcatgtatc atcatggggc agttagaacc aagtgaaggc 1440
aagatcaaacc attccggccg catcagctt tgcagccaaat tcagttggat catgcccgt 1500
accatcaagg agaacataat ctccggcggtc agttacgacg agtaccgcta tcgctcggt 1560
attaaggcct gtcagttggaa ggag 1584

<210> 102
<211> 323
<212> DNA
<213> Artificial Sequence

<220>
<223> Trans-splicing domain of CFTR PTM

<400> 102

gtaagatatc accgatatgt gtctaacctg attcgggcct tcgatacgct aagatccacc 60
ggtaaaaaag ttttcacata atttcttacc tcttcttgcatttcatgtttt gatgacgctt 120
ctgtatctat attcatcattt gaaacacca atgatattttt cttaatggat gcctggcata 180
atcctggaaa actgataaca caatgaaattt cttccactgt gcttaattttt accctctgaa 240

ttctccattt cccccataat catcattaca actgaactct ggaaataaaa cccatcattta 300
ttaactcatt atcaaatcac gct 323

<210> 103
<211> 165
<212> DNA
<213> Artificial Sequence

<220>
<223> PTM Binding domain

<400> 103
gctagcaata atgacgaagc cgcccccac gctcaggatt cacttcctc caattatcat 60
cctaagcaga agtgtatatt cttatttgc aagattctat taactcattt gattcaaaat 120
attnaaaaata cttcctgttt cacctactct gctatgcacc cgccgg 165

<210> 104
<211> 225
<212> DNA
<213> Artificial Sequence

<220>
<223> Trans-splicing domain of CFTR PTM

<400> 104
aataatgacg aagccgcccc tcacgctcag gattcacttg ccctccaaatt atcatcctaa 60
gcagaagtgt atattcttat ttgtaaagat tctattaact catttgattc aaaatattta 120
aaatacttcc tgtttcacct actctgctat gcacccgcgg aacattatta taacgttgc 180
cgaataactaa ctggtacctc ttctttttt tttgatatcc tgcag 225

<210> 105
<211> 3069
<212> DNA
<213> Artificial Sequence

<220>
<223> CFTR PTM sequence

<400> 105
acttcacttc taatgatgat tatgggagaa ctggagcctt cagaggtaa aattaagcac 60
agtggaaagaa tttcattctg ttctcagttt tcctggatta tgcctggcac cattaaagaa 120
aatatcatct ttgggtttc ctatgatgaa tatagataca gaagcgtcat caaagcatgc 180
caactagaag aggacatctc caagttgca gagaaagaca atatagttct tggagaaggt 240
ggaatcacac tgagtggagg tcaacgagca agaatttctt tagcaagagc agtatacaaa 300
gatgctgatt tggattttt agacttcct tttggatacc tagatgttt aacagaaaaaa 360
gaaatatttg aaagctgtgt ctgtaaactg atggctaaca aaactaggat tttggtaact 420
tctaaaatgg aacatttaaa gaaagctgac aaaatattaa ttttgcattga aggtacgac 480
tattttatg ggacattttc agaactccaa aatctacagc cagactttag ctcaaaactc 540
atgggatgtg attcttcga ccaatttagt gcagaaagaa gaaattcaat cctaaactgag 600
accttacacc gtttctcatt agaaggagat gctcctgtct cctggacaga aacaaaaaaa 660
caatcttttta aacagactgg agagttggg gaaaaaaagga agaattctat tctcaatcc 720
atcaactcta tacgaaaatt ttccattgtg caaaagactc ctttacaaat gaatggcatc 780
gaagaggatt ctgatgagcc ttttagagaga aggctgtct tagtaccaga ttctgagcag 840
ggagaggcga tactgcctcg catcagcgtg atcagcactg gccccacgct tcaggcacga 900
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cgaaagacaa cagcatccac acgaaaagtg tcactggccc ctcaggcaaa cttgactgaa 1020
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aacgaagaag acttaaagga gtgctttttt gatgatatgg agagcatacc agcagtgact 1140
acatggaaaca cataccttcg atatattact gtccacaaga gcttaatttt ttttgcattt 1200

tggtgcttag	taattttct	ggcagaggtg	gctgcttctt	tggttgtct	gtggctcc	1260
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actttgttg	ctatggatt	cttcagaggt	ctaccactgg	tgcatactct	aatcacagt	1440
tcgaaaattt	tacaccacaa	aatgttacat	tctgttcttc	aagcacctat	gtcaaccctc	1500
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gcttttatta	tgttgagagc	atatttcctc	caaaccctac	agcaactcaa	acaactggaa	1740
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cttcgtgcct	tcggacggca	gccttacttt	gaaactctgt	tccacaaagc	tctgaattt	1860
catactgcca	actggttctt	gtacctgtca	acactgcgt	ggttccaaat	gagaatagaa	1920
atgatttttg	tcatcttctt	cattgtgtt	accttcattt	ccattttAAC	aacaggagaa	1980
ggagaaggaa	gagttggat	tatcctgact	ttagccatga	atatcatgag	tacattgcag	2040
tgggctgtaa	actccagcat	agatgtggat	agcttgcgt	gatctgttag	ccgagtcttt	2100
aagttcattt	acatgccaac	agaaggtaaa	cctaccaaat	caacccaaacc	atacaagaat	2160
ggccaactct	cgaaaagttat	gattattgag	aattcacacg	tgaagaaaga	tgacatctgg	2220
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gccatattag	agaacatttc	cttctcaata	agtcctggcc	agaggggtggg	cctctggga	2340
agaactggat	cagggaaagag	tactttgtt	tcagctttt	tgagactact	gaacactgaa	2400
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agaagaactc	taaaaacaagc	atttgctgtat	tgcacagtaa	ttcttgcgtt	acacaggata	2820
gaagcaatgc	tggaaatgcca	acaatttttg	gtcatagaag	agaacaaaagt	gcggcagttac	2880
gattccatcc	agaaaactgct	gaacgagagg	agccttcc	ggcaagccat	cagccccctcc	2940
gacagggtga	agctcttcc	ccaccggaaac	tcaagcaagt	gcaagtctaa	gcccccagatt	3000
gctgctctga	aagaggagac	agaagaagag	gtgcaagata	caaggcttca	tcattcatcat	3060
catcattag						3069

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<210> 106
<211> 131
<212> DNA
<213> Artificial Sequence
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<220>
<223> Binding domain of mouse factor VIII PTM

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<400> 106
ctcgagctta cctgaactaa ttttttagaa tattaaaatc ctaagctttt atatctctat 60
ccctctatct tttgctctct atccaaatttt tattaactta gactttaaaa agaaaacttat 120
qaaaaaaatt t 131
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<210> 107
<211> 71
<212> DNA
<213> Artificial Sequence

<220>
<223> Spacer sequence of PTM

<210> 108

<211> 527
<212> DNA
<213> Artificial Sequence

<220>
<223> Chicken beta actin promoter sequences

<400> 108
ccatggtcga cgtagcccc acgttctgct tcactctccc catctccccc ccctccccac 60
cccccaatttt gtatttattt attttttaat tattttgtgc agcgatgggg gcgggggggg 120
ggggggggcg cgccgcaggc ggggcggggc ggggcgaggg gcggggcggg gcgaggcgga 180
gaggtgcggc ggcagccaat cagagcggcg cgctccgaaa gttcccttta tcgcgaggcg 240
gcggcggcg cgccctata aaaagcgaag cgccgcggcg ccggagtcg ctgcgacgct 300
gccttcgccc cgtgccaacc tccgcctcga gcttaccta actaatttt tagaatatta 360
aaatcctaag ctttatact cctatccctc tatctttgc tctctatcca attttatta 420
acttagactt taaaaagaaa cttatgagaa aaattccgc ggaacattat tataacgtt 480
ctcgaatact aactggtacc tcttctttt ttttgatat cctgcag 527

<210> 109
<211> 169
<212> DNA
<213> Artificial Sequence

<220>
<223> Sequence not included in construct

<400> 109
cgccgcctcg cgccgccccgc cccggctctg actgaccgcg ttactccac aggtgagcgg 60
gcgggacggc ccttctcctc cgggctgtaa ttagcgcttg gtttaatcac ggcttgttc 120
ttttctgtgg ctgcgtgaaa gccttgaggg gctccggag gaattcgt 169

<210> 110
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> F8 PTM sequences

<400> 110
ggagtcgctg cgacgctgcc ttccggccgt gccaacctcc gc 42

<210> 111
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> F8 PTM sequences

<400> 111
ctcgagcacc gatatcgtaa ct 22

<210> 112
<211> 53
<212> DNA
<213> Artificial Sequence

<220>

<223> Exon 26, Flag tag, stop sequences of mouse factor VIII PTM

<400> 112
gaggcccaagc agcaatacga ctacaaggac gacgatgaca agtgagttta aac 53

<210> 113
<211> 71
<212> DNA
<213> Artificial Sequence

<220>
<223> Spacer sequences of human or canine factor VIII PTM

<400> 113
ccgcggaaaca ttattataac gttgctcgaa tactaactgg taccttttctt ttttttttg 60
atatcctgca g 71

<210> 114
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Branch point and polypyrimidine tract sequences of human papilloma virus PTM

<400> 114
tactaactgg taccttttctt ttttttttg atatcctgca gggcg 47

<210> 115
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Branch point and polypyrimidine tract of human papilloma virus PTM

<400> 115
tactaactgg taccttttctt ttttttttg atatcctgca gggcg 47

<210> 116
<211> 80
<212> DNA
<213> Artificial Sequence

<220>
<223> Binding domain of human papilloma virus PTM

<400> 116
cagttaatac acctaattaa caaatcacac aacgctttgt tgtattgctg ttctaatgtt 60
gttccataaca cactataaca 80

<210> 117
<211> 149
<212> DNA
<213> Artificial Sequence

<220>
<223> Binding domain of human papilloma virus PTM

<400> 117
cagttataac acctaattaa caaatcacac aacgctttgt tgtattgctg ttctaatgtt 60
gttccataaca cactataaca ataatgtcta tactcaactaa ttttagaata aaactttaaa 120
catttatcac atacagcata tcgattccc 149

<210> 118
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> Binding domain of human papilloma virus PTM

<400> 118
gatgatctgc aacaagacat acatcgaccg gtcca 35

<210> 119
<211> 104
<212> DNA
<213> Artificial Sequence

<220>
<223> Binding domain of human papilloma virus PTM

<400> 119
cttcaggaca cagtggctt tgacagttaa tacacctaata taacaaatca cacaacggtt 60
tgttgtattg cagttctatg ttgttccata cacactataa caat 104

<210> 120
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Binding domain of human papilloma virus PTM

<400> 120
gatgatctgc aacaagac 18

<210> 121
<211> 99
<212> DNA
<213> Artificial Sequence

<220>
<223> Binding domain of human papilloma virus PTM

<400> 121
gacacagtgg ctttgacag ttaatacacc taattaacaa atcacacaac ggtttgtt 60
attgcagttc taatgttgtt ccatacacac tataacaat 99

<210> 122
<211> 138
<212> DNA
<213> Artificial Sequence

<220>
<223> Binding domain of human papilloma virus PTM

<400> 122
gatgatctgc aacaagacat acatcgaccg gtccacttca ggacacagtg gctttgaca 60
gttaatagac ctaattaaca aatcacacaa cggttggta tattgcagtt ctaatgttgt 120
tccatacaca ctataaca 138

<210> 123
<211> 89
<212> DNA
<213> Artificial Sequence

<220>
<223> Binding domain of human papilloma virus PTM

<400> 123
gatgatctgc aacaagacga cacagtggct tttgacagtt aatacaccta attaacaat 60
cacacaacgg tttgttgtat tgcagttct 89

<210> 124
<211> 66
<212> DNA
<213> Artificial Sequence

<220>
<223> Trans-spliced product

<400> 124
agaatgtgtg tactgcaagc aacagttact gcgacgtgag ggcggcttcg tctggactg 60
ggtggaa 66

<210> 125
<211> 71
<212> DNA
<213> Artificial Sequence

<220>
<223> Trans-spliced product

<400> 125
gtgtactgca agcaacagtt actgcgacgt gagggcggct tcgtctggaa ctgggtggat 60
cagtcgctga t 71

<210> 126
<211> 500
<212> DNA
<213> Artificial Sequence

<220>
<223> Reverse complement of trans-spliced product comprising cystic fibrosis
transmembrane regulator-derived sequences and His
tag sequences

<400> 126
gtgggagtgg cacttccag ggtcaaggaa ggcacgggg aggggcaaac aacagatggc 60
tggcaactag aaggcacagt cgaggctgat cagcggtta aacttaagct tggtaccgag 120
ctcggatcca ctagtccagt gtggtggaa tctgcagata tccagcacag tggcggccgc 180

cta atgatga t gatgatgat gctcttctag ttggcatgct ttgatgacgc ttctgtatct 240
atattcatca taggaaacac caaagatgat atttcttta atgggccag gcataatcca 300
ggaaaactga gaacagaatg aaattcttcc actgtgctt atttaccct ctgaaggctc 360
cagttctccc ataatcatca ttagaagtga agtctgcagg aaaaaaaaga agaggtacca 420
gttagtactc gagcaacgtt ataataatgt tccgcggata atgaccta atgatgggt 480
ggcccgttt aaacgctagc 500

<210> 127
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> 3'end of trans-spliced product comprising cystic fibrosis
transmembrane regulator-derived sequences and His
tag sequences

<400> 127
gctagcgttt aa 12

<210> 128
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> 5'end of trans-spliced product comprising cystic fibrosis
transmembrane regulator-derived sequences and His
tag sequences

<400> 128
tgccactccc ac 12